REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requsested. Claims 1-5, 7-23, and 31-33 were pending in this application. Claims 1, 5, 17, and 23 are amended and new claim 34 is added in this amendment. No new matter has been added.

CLAIM REJECTIONS - 35 U.S.C., § 112

Claims 1 and 17 stand rejected under 37 U.S.C. § 112, second paragraph, as being indefinite. (Office Action at 4).

First the Office Action states that the term "command-responsive" is not defined and is unclear as to what the term means. Applicants believe the term "command-responsive" would be clear to a person of ordinary skill in the art in the context of the claim as a whole read in view of the disclosure of the specification. Nevertheless, to clarify the terminology and advance prosecution, Applicants have amended claim 1 by deleting the term "command-responsive." Instead, claim 1 now recites "said closure mechanism being responsive to commands from said computer controller...." This amendment is supported by the specification disclosure which teaches that the incubator doors "are controlled by commands from the assay manager program to open and close the doors 622, 624 at the proper times." (Page 44, Lines 1-2).

As to claim 17, the Office Action indicates that it is unclear how the housing comprises a circular lid. Claim 1, from which claim 17 depends, recites "a housing including a receptacle access opening." Claim 17 recites that the "housing is generally cylindrical in shape and includes a generally circular lid." The housing structure as recited is clearly shown in the drawings and described in the specification. For example, referring to Figure 22, the specification explains that "each of the incubators has a housing with a generally cylindrical portion 610, suitably mounted to the datum plate 82, with an insulating jacket 612 and an insulated cover 611." (Page 43, Lines 11-13). It is clear from Figure 22 that the cover 611 is generally circular in shape. Referring to Figure 23A, the specification explains that an alternate embodiment of the incubator includes a housing assembly 1650 with a cylindrical portion 1610 and a cover 1676. (Page 48, Lines 16-

19). It is clear from Figure 23A that the cover is generally circular. To provide some clarification, and to conform claim 17 to the terminology used in the specification, claim 17 is amended to change the term "lid" to "cover."

In view of the foregoing, Applicants respectfully request that the rejections under 35 U.S.C. § 112 be withdrawn.

CLAIM REJECTIONS - 35 U.S.C. § 102

Claims 1, 4-5, 7-9, 20-23, and 31 stand rejected under 35 U.S.C. § 102(e) as anticipated by, or, in the alternative, under 35 U.S.C. § 103, as obvious over U.S. Patent No. 6,503,751 to Hugh ("Hugh").

Though Applicants disagree with the conclusions set forth in the Office Action, amendments have been made to the claims to clarify the claimed invention.

First, the Office Action suggests that the term "command-responsive" is not defined and could therefore mean a verbal or manual command. (Office Action at 2). Applicants submit that such an interpretation would be illogical and plainly incorrect in view of the claim as a whole read in view of the specification. Nevertheless, as explained above, claim 1 is amended by deleting the phrase "command-responsive" and revising the language to recite that the closure mechanism is responsive to commands from the computer controller to move the door between the open and closed positions. Accordingly, an incubator, such as that described in Hugh, which is opened manually does not anticipate independent claim 1.

Furthermore, Hugh does not teach doors that are opened in an automated manner by a closure mechanism that is responsive to commands from a computer controller. This is acknowledged in the Office Action. (Office Action at 6). The Office Action suggests, however, that it would nevertheless be obvious to incorporate "electronic automated movement" to the door of Hugh. (Office Action at 6). The Office Action suggests that it would have been obvious to automate the door of Hugh because:

> the automation of any door used as entry or exit has a number of benefits. For example, automated doors allow one to be free of having to employ their hands to touch the door or used [sic] physical force to open the doors. Everyone may not

> have the physical ability to open a door. Automated doors free up ones' hands to carry objects freely without having to put them down to open the door manually. Automated doors reduce the probability of further contamination of ones hands.

(Office Action at 3).

In the context of a manually opened incubator, like that described in Hugh, there are numerous disadvantages to automating such a door, which would clearly outweigh any purported advantages. For example, automating such a door would add substantial cost and complexity to the overall incubator and would also negatively impact the reliability of the incubator as such automated mechanisms are just another component that can break down in the instrument. Accordingly, the disadvantages of automating an incubator door, such as the door of Hugh, would suggest against such automation where such automation is clearly not necessary.

As Applicants explained in the Response to the February 23, 2006 Office Action, there is no more reason to automate the door of Hugh than there is to automate the door of a kitchen refrigerator. The Office Action, however, takes issue with Applicants' comparison of Hugh's incubator and a kitchen refrigerator as such is allegedly a comparison of non-analogous art. (Office Action at 3). Applicants agree that a kitchen refrigerator is not analogous art with respect to the claimed invention, but it is analogous art with respect to Hugh. Art is analogous if it is reasonably pertinent to the particular problem with which the inventor was involved. (*See* MPEP § 2141.01(a)). A refrigerator is a chest-like, insulated container with a sealed, hinged door which is manually opened and closed and which forms substantially the entire front wall of the container for maintaining the interior of the container at a desired, non-ambient temperature. In this regard, the incubator of Hugh is no different. It too is a chest-like, insulated container with an insulated and sealed hinged door that, like the refrigerator door, is manually openable to permit items to be placed in and removed from the container. Thus, a kitchen refrigerator (and particularly a door thereof) is analogous art with respect to Hugh.

It would not be obvious, because there would be no reason, to incorporate an automated door into the incubator of Hugh.

Furthermore, Hugh does not teach or suggest sensors for indicating whether the door is in the closed position or the open position. The Office Action states that the previous language of

the claim, which recited that the sensors detect if the door is in the closed position or the open position, would be met by any prior art that discloses a system that detects one of the two positions. (Office Action at 3). To clarify the intended meaning, claim 1 has been amended to recite that the sensors detect whether the door is in the closed position or the open position. This language is not met by prior art that discloses a system that detects one of the two positions.

Furthermore, Hugh does not disclose a door position detection circuit, but discloses a "door open detection circuit." (*See* Col. 11, Line 53.) The circuit does not detect the position of the door; it merely the detects that the door is open to any degree.

Claim 1 is also amended to clarify that when the door is in the open position, the door is positioned such that the receptacle access opening is sufficiently unblocked so as to permit a reaction receptacle to pass therethrough. Hugh simply does not teach this. Having sensors which indicate that the door is open by an amount sufficient to permit a receptacle to pass through the access opening is important in an incubator, such as the one claimed, which is part of an automated analyzer instrument. In such an instrument, a receptacle transport mechanism moves the reaction receptacles into and out of the incubator through the access opening. A sensor mechanism for detecting whether the door is in the open position helps the instrument's computer controller determine if a receptacle can be moved into or out of the incubator by the receptacle transport mechanism. In this regard, and in response to the comment in the Office Action that Applicants' arguments are not commensurate in scope with that of the claim, claim 1 is amended to recite the incubator as part of an automated instrument.

Furthermore, there would be no logical reason to incorporate into the incubator door of Hugh sensors which detect whether the door is in the open position (i.e., sufficiently open to permit a receptacle to be passed through the access opening) or the closed position. Hugh's door is operated manually; the user can visually assess how far the door should be opened to move items into and out of the incubator. The door open detection circuit of Hugh simply informs lab personnel if the door has not been closed properly.

The Office Action further states that "[e]ven if the claim were amended to recite that the system and/or door is automated...[t]he ability to employ a computer, controller, mechanical

means, and etc. to perform manual mechanical actuations (automated opening and closing of a door) is conventional and well-known and such a modification to a manual device would only require routine skill in the art." (Office Action at 4). Even if this statement is true, it fails to establish a *prima facie* case of obviousness. The fact that the claimed invention is merely within the capabilities of one in the ordinary skill is not sufficient by itself to establish obviousness. (*See* MPEP §2143.01(IV)). There must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in art, to modify the references or combine the teachings. (*See* MPEP §2143).

To summarize, Hugh does not teach an automated door that is opened by a closure mechanism that is responsive to commands from a computer controller nor does it teach sensors for indicating whether the door is in the open or closed position, and there is no teaching, suggestion, or motivation for incorporating these missing elements into the incubator door of Hugh. Thus, for these reasons, Applicants respectfully submit that independent claim 1 is allowable over the teachings of Hugh.

Claims 4-5, 7-9, 20-23, and 31 depend from allowable claim 1 and are thus also allowable over Hugh. Furthermore, claims 5, 7, and 22 are allowable over Hugh for additional and independent reasons.

Dependent claim 5 recites that the closure mechanism further comprises a motor operatively coupled to the door. Hugh does not teach or suggest this feature. Thus, claim 5 is allowable over Hugh for this additional and independent reason.

Dependent claim 7 recites that the door comprises an arcuate closure panel, a hinge plate extended transversely from an end of the closure panel, and a lower actuating plate extending transversely from an opposite end of the closure panel and being coupled to the motor. Hugh does not teach or suggest these particular features, and the Office Action provides no explanation as to where the features of claim 7 are supposedly taught in Hugh. Thus, claim 7 is allowable over Hugh for this additional and independent reason.

Claim 22 recites a receptacle bridge for supporting the bottom of a reaction receptacle being transferred through the receptacle access opening. Hugh does not teach or suggest this

feature, and the Office Action provides no explanation as to where this feature is supposedly taught in Hugh. Thus, claim 22 is allowable over Hugh for this additional and independent reason.

For the foregoing reason, Applicants respectfully request withdrawal of the rejections based on the teachings of Hugh.

CLAIM REJECTIONS - 35 U.S.C. § 103

Hugh and Porte

Claims 1, 4-5, 7-11, 13, 16-17, 20-23, and 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,250,261 to Porte ("Porte") in view of Hugh.

Applicants respectfully traverse the rejection to the extent it is deemed to apply to the claims as amended. Porte describes cam-operated sliding doors for an incubator. As acknowledged in the Office Action, Porte fails to disclose door sensors for indicating whether the door is in an open or closed position. (Office Action at 7). The Office Action suggests, however, that it would have been obvious to one of ordinary skill in the art to incorporate the door sensing circuit of Hugh in order to indicate when the device is open. (Office Action at 7). Applicants respectfully disagree.

First, as explained above, Hugh merely teaches a circuit that indicates that the door is not in the fully closed position. It does not teach or suggest sensors for indicating whether the door is in an open position or closed position, where, in the context of the claimed invention, the open position means that the door is sufficiently open to allow a receptacle to pass through the access opening. Furthermore, the Office Action offers no evidence of a teaching, suggestion, or motivation to incorporate sensors for indicating whether the door is in an open or closed position into the apparatus described in Porte. Moreover, the incubator of Hugh includes a pivoting door that is a conductor of a switch circuit such that when the door is closed, the door frame electrically contacts the incubator to complete the circuit, and when the door is open, the circuit is broken, thereby providing an indication that the door is not closed. Porte, on the other hand, describes doors that are horizontally sliding tabs which slide in a radial direction with respect to a

rotating cam with which each of the tabs is engaged via a cam follower. "Although published subject matter is 'prior art' for all that it discloses, in order to render an invention unpatentable for obviousness, the prior art must enable a person of ordinary skill to make and use the invention." In re Kumar, 418 F.3d 1361, 1368 (Fed.Cir. 2005) (citation omitted). The teachings of Porte and Hugh would not enable a person of ordinary skill in the art to incorporate a sensor for indicating whether the door is in an open or closed position in the incubator of Porte.

Thus, claim 1 is allowable over the combined teachings of Hugh and Porte.

Claims 4-5, 7-11, 13, 16-17, 20-23, and 31 depend from allowable claim 1 and are thus also allowable over Porte and Hugh. Furthermore, claims 5, 7, 13, 16, and 22 are allowable over Porte and Hugh for additional and independent reasons.

Dependent claim 5 recites that the closure mechanism further comprises a motor operatively coupled to the door for effecting powered rotation of the door. No such feature is taught or disclosed in Porte or Hugh. Thus, claim 5 is allowable over Hugh and Porte for this additional and independent reason.

Claim 7 recites that the door comprises an arcuate closure panel, a hinge plate, and a lower actuating plate. Neither Hugh nor Porte describes such a door configuration, and the Office Action does not explain where such teaching can supposedly be found. Accordingly, claim 7 is allowable over Hugh and Porte for this additional and independent reason.

Claim 13 recites that the receptacle stations of the carousel are elongated in a radial direction. The reaction receptacle of Porte is a circular cuvette, so Porte does not teach a receptacle station that is elongated in a radial direction. Thus, claim 13 is allowable over Hugh and Porte for this additional and independent reason.

Claim 16 recites that the receptacle carrier further includes reaction receptacle sensors for sensing the presence of a reaction receptacle in a receptacle station. No such feature is taught or disclosed in either Huge or Porte, and the Office Action provides no explanation as to where such a feature is supposedly taught in the cited art. Accordingly, claim 16 is allowable over Hugh and Porte for this additional and independent reason.

Dependent claim 22 recites a receptacle bridge. No such feature is taught or suggested in either Huge or Porte, and the Office Action provides no explanation as to where this feature is supposedly taught in the cited art. Accordingly, claim 22 is allowable over Hugh and Porte for this additional and independent reason.

For the foregoing reason, Applicants respectfully request withdrawal of the rejections based on the combined teachings of Porte and Hugh.

Hugh and Kawaguchi

Claims 2, 3, 17-19, and 32-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hugh and further in view of U.S. Patent No. 5,882,594 to Kawaguchi ("Kawaguchi").

Claims 2, 3, 17-19, and 32-33 are allowable as being dependent from allowable independent claim 1, there being no teaching or suggestion in Kawaguchi to overcome the shortcomings of Hugh with respect to the subject matter of independent claim 1. Furthermore, claims 3 and 33 are allowable over Hugh and Kawaguchi for additional and independent reasons.

Dependent claims 3 and 33 recite that the receptacle mixing mechanism includes a motor, a shaft, and a disk mounted to the shaft at an acute angle with respect to the longitudinal axis of the shaft. The cited art includes no disclosure of such a receptacle mixing mechanism, nor does the Office Action identify any corresponding disclosure in the cited references. Accordingly, claims 3 and 33 are allowable over Hugh and Kawaguchi for this additional and independent reason.

For the foregoing reason, Applicants respectfully request withdrawal of the rejections based on the combined teachings of Hugh and Kawaguchi.

Hugh and Robinson

Claims 10-16 and 22-23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Hugh and further in view of U.S. Patent No. 5,374,395 to Robinson ("Robinson").

Claims 10-16 and 22-23 are allowable as being dependent from allowable independent claim 1, there being no teaching or suggestion in Robinson to overcome the shortcomings of

Hugh with respect to the subject matter of independent claim 1. Furthermore, claims 12, 13, and 22 are allowable over Hugh and Robinson for additional and independent reasons.

Claim12 recites a position encoder operatively coupled to the carousel and constructed and arranged to indicate a rotational position of the carousel. Robinson discloses an encoder on the gearbox motor of the load tram 300. (Col. 10, Lines 35-44). Robinson explains that this encoder "assists in obtaining accurate placement of the test pack on the carousel." Robinson does not explain how the encoder supposedly assists in placement of the test pack on the carousel and moreover the encoder on the gearbox of the tram does not teach or suggest the claimed position encoder for indicating the rotational position of the carousel. Accordingly, claim 12 is allowable over Hugh and Robinson for this additional and independent reason.

Also claim 13 recites that each receptacle station of the carousel is elongated in a radial direction to accommodate an elongated reaction receptacle and to carry the reaction receptacle supported in a radial orientation. The test packs 200 of Robinson are carried in a vertical orientation with respect to their long dimension. Furthermore, as shown in Figures 28 and 50 the test packs are not carried in a radial orientation with respect to the rotational axis of the carousel. Thus, claim 13 is allowable over Hugh and Robinson for this additional and independent reason.

Claim 22 recites a receptacle bridge. Robinson does not disclose such a structure, nor does the Office Action identify any such disclosure in Robinson. Accordingly, claim 22 is allowable over Hugh and Robinson for this additional and independent reason.

For the foregoing reason, Applicants respectfully request withdrawal of the rejections based on the combined teachings of Hugh and Robinson.

NEW CLAIM 34

New claim 34 depends from claim 4 and is directed to the embodiment shown in Figure 22 and described in the accompanying text (See, e.g., page 43, line 28, *et seq.*). Claim 34 depends from an allowable claim and is therefore also allowable. Moreover, claim 34 recites that the door of the closure mechanism comprises a cylinder with a slot extending therethrough. No such structure is described in the cited art, and thus claim 34 is allowable for this additional and independent reason.

CONCLUSION

Based on the foregoing remarks, Applicants submit that the instant application is now in condition of allowance and respectfully request withdrawal of all rejections and allowance of the application.

Respectfully submitted,

Date: January 11, 2007 By _____

Richard Wydeven
Attorney for Applicants
Registration No. 39,881
ROTHWELL, FIGG, ERNST & MANBECK, p.c.
Suite 800, 1425 K Street, N.W.
Washington, D.C. 20005
Telephone: (202)783-6040